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ABSTRACT

Presentations made by representatives of various extension centers cover: psychology in extension, concepts for extension and advisory work, extension research policy, problem-solving research, observations on an experience in extension education, and comments on the seminar. Group reports are also included. (MJM)

ED104266

INTERNATIONAL SEMINAR IN EXTENSION EDUCATION

HOTEL LEPOLAMPI, FINLAND

SEPTEMBER 24-28,1973

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CONTENTS

Program 1

List of participants 5

Welcome Address 10
Harri Westermarck

Presentation of different centers 13

Psychology in Extension 22
D.J. Griffith

Concepts for Extension and Advisory Work 27
Hartmut Albrecht

Extension Research Policy 38
A.W. van den Ban

Problem Solving Research: A Strategy for Change 44
Niels Röling

Observations on our Experience in Extension 53
Education
G.L. Carter, Jr.

Comments on International Seminar in Extension 67
Education
G.L. Carter, Jr.

Group reports 72

Miscellaneous 76

Observations about Discussions during 79
International Seminar in Extension Education

Concluding Remarks 86
Harri Westermarck

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INTERNATIONAL SEMINAR IN EXTENSION EDUCATION

SPONSORED BY W.K. KELLOGG FOUNDATION

HOTEL LEPOLAMPI, FINLAND, SEPTEMBER 24-28,1973

INTERNATIONAL SEMINAR IN EXTENSION EDUCATION
Sponsored by W.K. Kellogg Foundation

Date: September 24-28, 1973

Place: Hotel Lepolampi, Finland

Objectives: Increase of personal acquaintance among the staff members in different W.K. Kellogg Foundation sponsored centers and better understanding about the objectives and functions of each center.

PROGRAM

Monday, September 24

Participants arrive at Helsinki. Registration at the seminar office at Hotel Lepolampi 20 miles north of Helsinki

5.00-6.00 p.m. Dinner

6.00-6.15 Welcome address by Dr. Harri Westermarck, Director of Center for Extension Education and In-Service Training, Helsinki University

6.15-6.30 Opening of the seminar by Dr. Mikko Juva, President of Helsinki University

6.30-6.45 Finnish folk songs, Akademiska Sångförening's quartet

6.45- Informal social association. Cocktails

Tuesday, September 25

8.00-8.30 a.m.	Breakfast
8.30-12.00	Brief presentations and further elaborations of the pre-sent background papers
12.00-1.00 p.m.	Lunch
1.00-3.00	General discussion on analytical questions about the curriculums and operations of the different centers
3.00-3.30	Coffee
3.30-5.00	Discussion continues in groups
5.00-6.00	Dinner
6.30-	Finnish sauna bath by the lake

Wednesday, September 26

8.00-8.30 a.m.	Breakfast
8.30-9.15	Application of psychological and pedagogical research and theories in extension education by Mr. D.J. Griffith, B.A., Lecturer at Agricultural Extension and Rural Development Centre, Reading University
9.15-10.00	Application of sociopsychological and sociological research and theories in extension education by Dr. Hartmut Albrecht, Professor at Abteilung für Kommunikationsforschung und Landwirtschaftliches Beratungswesen, Universität Hohenheim
10.00-12.00	The seminar divides into groups in which specific topics on the theoretical bases of extension education are discussed

12.00-1.00 p.m. Lunch

1.00-3.30 Group discussions continue

4.00- Departure for a sight-seeing tour of Helsinki

Evening free

Thursday, September 27

8.00-8.30 a.m. Breakfast

8.30-9.15 Extension research policy. How much is curriculum research needed? by Dr. Anne van den Ban, Professor at Department of Extension Education, Agricultural University, Wageningen

9.15-12.00 Views on the ways how different centers have planned and conducted inquiries and surveys dealing with extension educational problems - Group discussions

12.00-1.00 p.m. Lunch

1.00 -2.00 Facilitating learning for extension personnel in in-service training by Dr. G.L. Carter, Jr., Professor at University of Wisconsin-Extension

2.00-3.00 General discussion

3.00-3.30 Coffee

3.30-5.00 Discussion continues in groups

5.00-6.00 Dinner

6.00- Preparing of group reports for next day's plenary session

Friday, September 28

8.00-8.30 a.m. Breakfast

8.30-11.30 Plenary session, group discussion reports

11.30-12.00 Observations on our experiences in extension education by Dr. D.L. Carter, Jr.

12.00-12.15 Concluding remarks by Dr. Harri Westermarck

12.15-1.00 p.m. Lunch

1.00-6.00 Excursion to the countryside

International Seminar in Extension Education
September 24 -28, 1973, Hotel Lepolampi

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Welcome address by Dr. Harri Westermarck

Distinguished Rector of Helsinki University

Ladies and gentlemen

The significance of research work and production techniques is increasing at an accelerated rate in modern society. Unless the process of applying the results is expedited, the farm population will unavoidably lag behind the progress taking place in a developing society in other fields. When we compare the farming sector with its many tens of thousands of operators, with the industrial sector in which the number of enterprises is much smaller and their size considerably larger and considering furthermore that the farm population is much more firmly bound to traditional methods than is the case in many other occupations, it is necessary to pay special attention to the diffusion and adoption of new methods and accomplishments in farming.

AXINN AND THORAT in their newest book "Modernizing World Agriculture: A Comparative Study of Agricultural Extension Education Systems" state that the focus of an extension educator is "on the human condition. A deep concern is with the hundreds of thousands, maybe hundreds of millions of people who till the soil and manage the livestock and who literally feed and clothe us all."

Uptill recently many directors of advisory services believed that the most appropriate requirement for an advisory officer would be the mastering of as much as possible of technical knowledge of the field in concern. They believed that "when one knows enough from his subject matter field" he can also communicate the information to his audience in a way or another. However it became evident that the advisory services in many countries

were incapable of extending information and influencing farmers as directly and simultaneously as had been imagined. The search for the sources of resistance to change as well for the effective sources of influence when changes did occur led to the discovery of the role of art and science of helping : the role of educating advisors in psychology, sociology and communication methods.

KEITH LUKAS says that the teacher, the preacher, the social worker, the consultant, the agricultural expert, the marriage counsellor, the home demonstration agent are all saying to those they work with "Let me help you to change. Let me help you to do something different. Let me help you to begin to cope with whatever is making it hard for you to succeed."

The questions above are of serious ethical nature and one of the main goals of this seminar is to get to know how we in 10 different extension education projects have tried to teach change agents to construct in a best possible way this helping relationship. Through an exchange of experiences and views we might be also able to form some kind of over all desired theoretical frame of reference to teaching of extension education, because as in all behavioral sciences there exists also in ext. education a lack of standardization of concepts and theories. For example in some universities the concept of extension education refers only to problems concerned with agricultural advisory work but e.g. in Holland extension education refers to all kinds of change agencies on different subject matter fields.

Teaching in any applied subject matter field is not possible without research. In order not to get too far alien ated from the practical problems of extension personnel on the field we have to do up to date reports and feed back surveys regularly. One of the objectives

of this seminar is to enlighten the problem of how much so called curriculum research is needed in teaching extension education.

We are very pleased that we have had the honour and privilege to have this seminar here in Finland this year when the generous grant from W.K. Kellogg Foundation is running out.

We are very honoured that Dr. Juva, Rector of Helsinki University is here and has promised to open this seminar. We also appreciate very much that Mr. Summers from FAO is here with us to day. When the representative of the United Nations is at present it gives us a feeling that we are expected to do an important work during this seminar. We are expecially glad to see doctors Albrecht, van den Ban (who will be coming late this evening), Carter and Röling here at present. Dr. Stevenson from Nothern Ireland you are also heartily welcomed here.

And last but not least our colleagues from the Kellogg Foundation supported centers in Europe it is indeed nice to see you all again.

With these words I would like to welcome you here in Finland and Lepolampi once again. I hope that these days will be fruitful and that many new personal and professional contacts will be made.

PRESENTATION OF DIFFERENT CENTERS

Sweden

1. Target group

   Under graduate students
   - general communication
   - extension education

   Advisers (governmental, farm coop.)
   - induction training
   - in-service training

2. Behavioral objectives

   -"facilitate learning"

3. Type of curriculum contents

   - Definition of extension
     (create need of knowledge)
   - Goals of extension
     (change in behaviour)
   - Program planning (evaluation)
   - Methods (Mass, group, ind.)
   - Assesment of results

4. Method of teaching

   10 weeks - one subject
   Involve students through letting them decide on goals and methods and through evaluation
   Group work
   Groups (or individuals) develop a choosen program

5. Biggest problem

   How to convince authorities and advisers (politicians) of the need of training in extension education
   - arguments
   - examples
   - proof of achievements

1) a) Undergraduates
   - variety of basic disciplines
   b) Post-grad. in-service to agric. agent

2) Message to client-orientation

3) Discussion groups based on mimeographed material
   Exams (take home/- topics selected in consultation with students
   Role-playing-dialogue/group discussion
   Practical work in staff training

4) Increased concern with social aspects of often applied sciences

- Thinking of learning situations
  Do something to unfreeze
  - Brainstormed on experiences for unfreezing
  - Analytical questioning
  - Role playing-experience of others (van den Ban)
  - Make film - go into farm house
  - Make study - kind of advice advisors give farmers

What kinds of behaviors?
  Influence type of experience
  Experience of learners
  Example other than extension
My definition of extension education

1) Background in general pedagogics

2) a) In-service - short courses
   b) i) Undergrads - 30 hrs intro. course in study techniques
   ii) " - 60 hrs final year course in presentation of prof. information
   iii) Post-grad. - 4 mo. course in pedagogics for future teachers in agric. schools and ext. agents

3) Principles selected for applicability to practical situations

4) Variety of teaching methods as basis for student discussion and criticism.

Reading

1) Social science background
   A member seconded from advisory service

2) In-Service - post-experience (with technical training)
   a) British
   b) Overseas (developing countries)
   c) British making career overseas agriculturalists and others working in development (rural sector)

3) Adoption (in content and course length) in response to changes in organization and policy of agricultural advisory service e.g.
   > stress on group work, management

4) Social sciences / operational aspects

Helsinki

1) (Ass. Prof. in Ext. Educ.)
   + Assistantship - Agric./HE/Forestry

2) a) In-Service (advisory/teaching)
   b) Undergrads

3) a) Up to date subject matter and courses in communication
   b) Communication

4) a) subject matter/extension education
   b) Theory/application

5) a) 3-4 day courses (15 per year)
   b) 3 hrs each per week theory/practice

6) a) Design of short courses
   b) Induction - helping students understand importance/problems of communication

7) Making training applicable to other change agencies

Dublin

1) 3 permanent staff + part time
   Background in admin./communication) soc.science

2) a) In-service (minimum 3 years experience with technical training in agriculture/farm home management)
   b) County administrators (chief agric. officers)
   c) Undergraduates (through Department of Farm Management)

3) Help students draw on natural/social sciences to solve problems (abstract ⟷ concrete) with view to help farmers move from traditional ⟶ intensive farming

4) a) Programming/socio../psychol./admin. Research project
   b) Workshops on selected topic

5) Student presentations/discussion

6) Helping people in information services to industry

7) Student difficulty in using social science concepts

Hohenheim

1) Two units in University
   Background social Psychology/Agriculture

2) Undergrad. students priority. Participate in in-service courses

3) Aim to provide "frame of reference"

4) "Leverage" points for behaviour change

5) Lecture/discussion

6) Response to changes in agricultural sector
   Demands for new problem solving skills
   Will need to serve > students, and a wider variety of agencies

7) Students tend to exam-orientation increasing demands on unit

Tune

1) Agric.school/Information service

2) a) In-service - Ag. Extension
   i) Ext. agents
   ii) Farmers' Union officers
   b) Agric. teachers
   c) Research workers
   d) Private sector

3) Bring kn. up to date

4) a) Induction - communication, ext. ed. etc.
   In-service - technical knowledge/skills

5) Courses planned with assistance of a, b, c and private sector, especially technical aspects
   Short courses on teaching methods offered for teachers in agric. schools

6) Consultation with specialists

Loughry

1) Agric. ext./adult education
   and social science background

2) a) Ministry of Agric. advisers
   b) Teachers
   [c) Farmers' organizations]

3) Develop communication skills
   - on-the-job problem solving emphasis

4) Theoretical concepts related to skills required for job of adviser/teacher

5) Core concepts (structured)
application (less structured)
Lectures/discussion role playing, skill practice

6) Proposal for part-time courses
Additional staff-research/technology

7) Resistance to communication ideas at management level
Management of staff resources within unit

Vet. College, Norway

1) [a) Undergrad.
b) Post-grad.]
c) Vets - practitioners
- inspection personnel

2) Up-dating knowledge

3) 5-day courses
Regional w/e courses } group c

4) Lecturing e clinical demonstration in subject matter

5) Increase in extension education component in courses

6) Lack of teaching staff - restricts no. of courses which can be offered

Problems derived from the presentation of different centers

1) How do we assure compatibility between the organization and the training institutions?
   - adopt training to organiz.
   - make organiz. ready to accept trainees
   - assist ex-trainees in field

2) What arguments do we use to convince the authorities? What do we have to offer anyway?

3) How do we make social sciences, concepts, operational for problem solving

4) Given the position of our training institutions somewhere between univ. and extension, how do we develop adequate linkages with both. Do we need these linkages?

5) How do we develop an adequate curriculum for our task, both in terms of content and method
   e.g.
   - inductive vs. deductive
   - length of trainings
   - processes used to define contents, objectives
   - how do we teach in such a way that we apply what we teach
   - what expectations do we have of students (valid behav. objectives)

6) Given that our training is geared to problem solving, how do we evaluate the effectiveness of training?

7) What is the implicit philosophy we use and its implication for teaching, e.g.
   - role playing
   - rewards which make us tick
   - reference groups which reward us

8) Department staff motivation: How do we attract good staff. How keep good staff. How make good people interested in extension

Extension officers administrator
Specialist in extension methods
Extension research workers

9. How to connect physical science with extension (curriculum dimens)
10. How can we accumulate experience?
    How can we reward it, with what "structure of knowledge"?
11. How can we encourage departments to remain innovative, remain responsive to need and cooperate with others to apply what we teach
12. How can we as extension-teaching departments influence other departments?
13. How do we retain links with ex-trainees?
    - research with ex-trainees?
    - think of trainees as "colleagues and coworkers" after they go into the field
14. Given that present problems can seldom be solved with ready-made solutions, how can we help extension workers to help problem solving instead of providing ready-made solution.
    On what basis do we justify such a change in orientation
    How do we approach extension workers to change?
15. Goals of extension services
    - decrease income differences?
    - what else?
    - relation to national (political) goals?
    - leave it, how it happens to work out?

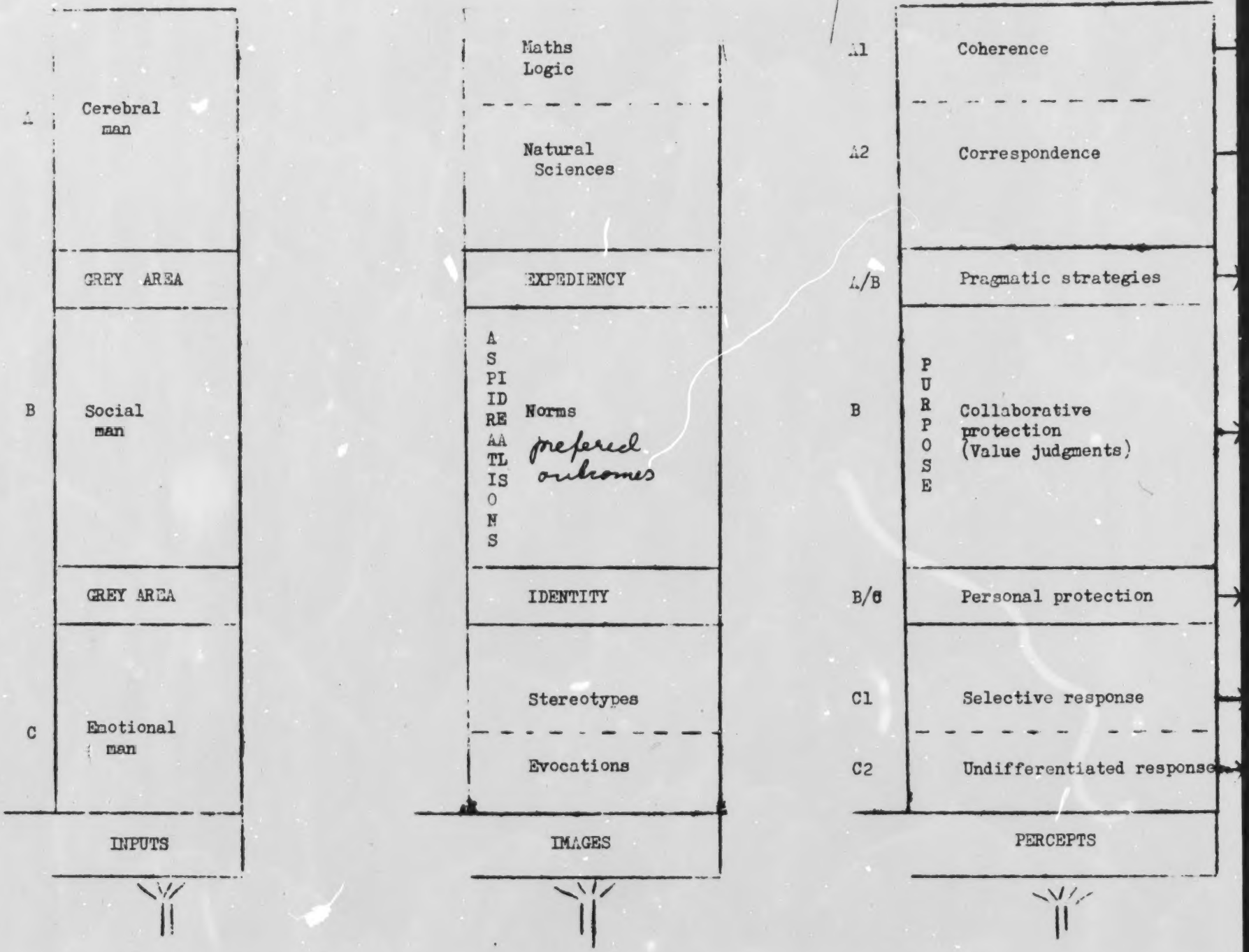
INTERNATIONAL SEMINAR IN EXTENSION EDUCATION

PSYCHOLOGY IN EXTENSION

1. Vertical and Horizontal Exposition

D.J. Griffith

PLATITUDES		ASSUMPTIONS
our concern is with the production of an end product some one capable of operating as an extension agent level of competence expected from such an agent could range from front-line client relationship to senior management producing such an end product would depend upon some organisational constraints total time available for training whether the curriculum is designed to programme the trainee or increase his capacity for self-programming whether the curriculum provides breadth at the expense of depth whether the curriculum emphasises the ingestion of information at the expense of functional improvement whether teaching strategies show preference for the 'lecture/discussion' approach over 'project activity' whether the curriculum emphasises skill training in preference to theory number competence and experience of staff available the boundary control between disciplines the degree of unanimity about the nature of the end product whether the organisation's inprimatur e.g. degree awarding influences or determines the academic legal of the course		All intelligent activity depends upon the capacity to process information INFORMATION PROCESSING CAN BE IMPROVED THROUGH SYSTEMATIC STUDY resulting in speedier and improved handling and retrieval of data in increasing quantities more effective presentation of arguments and drawing of inferences Increased range and grasp of ideas rapid gutting and extraction of written material the recognition and appraisal of processing limitations in others better appraisal of tactics and strategies necessary for effective communication improved generative processes through creative thinking


A
Cerebral man
GREY AREA
B
Social man
GREY AREA
C
Emotional man
INPUTS
Maths Logic
Natural Sciences
EXPEDIENCY
ASPIDREAATLISONS
Norms
prefered outcomes
IDENTITY
Stereotypes
Evocations
IMAGES
A1
Coherence
A2
Correspondence
A/B
Pragmatic strategies
PURPOSE
B
Collaborative protection (Value judgments)
B/C
Personal protection
C1
Selective response
C2
Undifferentiated response
PERCEPTS

	LEARNING	TEACHING ADVISING MANAGING
UNDERSTAND A1 & A2	Concept formation Axiomatics Rule/Principle Propositional analysis Relations Proof Evidence Probability Inference Structures Systems Models Logical trees Heuristics Hypothesis Theory Law	Presentation Display Demonstration Concrete Iconic Abstract Programming Data Collection Techniques Extrapolation Structuring techniques Model construction Simulation Experimental design Problem solving strategies Diagnostic routine.
TRY AB	Symptoms Syndromes	Remedies Prognosis
DECIDE B	Decision making process Rank ordering of preferred outcomes Procedure Cost/Benefit evaluation Formation of Norms (Authority Group processes Economic-Social-Aesthetic criteria Socialisation Function of Norms (Collaborative goal seeking and protection) Ethical Theory	Option analysis, program analysis Establishing priorites, policy formulation Target setting and monitoring Remedial and innovative prescription Risk analysis and outcome evaluation Setting maintenance and interpretation of Orders Rules Codes Procedure through discipline, etiquette commitment enthusiasm and control. Leadership in Group processes (participating facilitating co-ordinating) Persuasion Advocacy Salesmanship

	Learning	Teaching .dvising Managing
B/C PROTEST	Identity Ego & Superego development Personality defence patterns Threat thresholds	Directive and Non-directive counseling Therapy
C1 & C2 STABILISED RESPONSE	Factoids Formation and function of stereotypes	Awareness Modification Inflammation Reinforcement
	Prejudice Attitudes Beliefs Opinions	Change measure
LABILE RESPONSE	Aesthetic Sensitivity Affective Response	
	Imagination Curiosity	Stimulate

Dr. Hartmut Albrecht

Concepts for Extension and Advisory Work[+)]

The task in general terms

Farms as such don't have problems.
Farmers and the members of their families have.
To help them to solve their problems therefore involves: Change of behaviour

Experience and research show: There are no suitable recipes available to introduce change of behaviour in different real life situations.
Therefore:

> Change-agents must be able to analyse the situations in which they work.
> (GOODENOUGH, 1963, p. 25)

A closer look

Situations are complex. To analyse different situations one must go back to basic elements and their relationships - i.e. be able to define situations in general abstract terms and from there in concrete terms of the specific situation as well. There seems to be no other way to grasp the relevant conditions of each situation we face in our work.
The social and behavioural sciences offer a lot of different theories, but:

> most often they are "strangely silent on matters of directing and simplementing change" (BENNIS, 1965, p. 339).

They are theories of change and not of changing.

+) Summary of a presentation at the "International Seminar in Extension Education", held at Hotel Lepolampi, Finland, September 24 - 28, 1973.

Search for useful concepts

In our work we "define" situations according to our "experience" and our "knowledge". We have some ideas of what the situation is like, what is relevant and how " things are related". We work on"concepts" (our "private theories").

Concepts "tend to fix our perceptions and, derivatively, our thought and behaviour" (MERTON, 1967, p. 145). Concepts can lead as well as mislead. Therefore it is important to find out what sort of concepts are useful for our task.

Concepts, we are looking for, should provide:

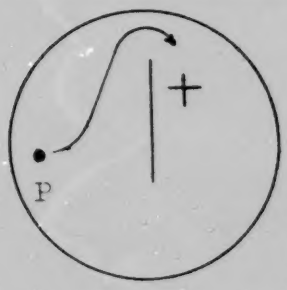
- an orientation for changing (i.e. explicit description of conditions under which change of behaviour will occur)
- indication of leverage points for extension and advisory-work to bring about change
- a coherent concept that enables us to grasp the interrelatedness of relevant factors of the overall context of concrete worksituations and at the same time to use relevant partial concepts without loosing sight of the overall situation
- a concept that is useful and correct even when only the core of the concept could be transferred to the user, i.e. advisors and extension-workers should get useful orientation from it already in an early stage of knowledge.

Field-theory and intersystem-model

The field-theory of behaviour (at the individual level) and an intersystem-model of the change-agent-system and the target-system (at the social system level) seem to be very useful. In a short-cut presentation they can be

introduced by several graphs, each explaining specific aspects based on the same conceptual orientation:

1. BEHAVIOUR (Lewin)



relevant terms:

$B_e = F(P, E)$

goals, valence, perceived possibilities, field of forces

Anything in a situation that is perceived by a person (P) als a goal (having positive valence: V^+) or a non-goal (having negative valence: V^-) evokes energy in the person to attain the goal or avoid the non-goal. But the way to reach the goals (or avoid the non-goals) may not be known or "barriers" may hinder the person to act according to its wishes. In this way, the forces that impinge upon the person (field of forces) determine the behaviour.

Example: A farmer feels, that he does not get enough out of his farm inspite of all work and effort spent. He values high additional income and relief of parts of the work-load. There are those general goals, but *) possibilities to attain them are vague or non existent.

*) perceived

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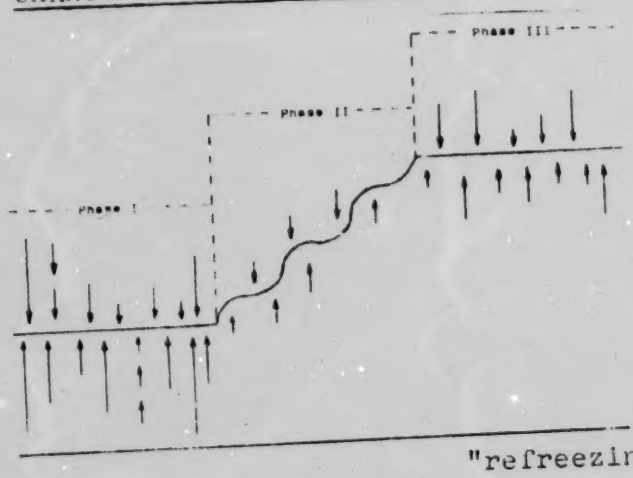
2. CHANGE OF BEHAVIOUR (Lewin)



relevant terms:

equilibrium, driving and restraining forces

"unfreezing" the existing "equilibrium"

moving to the new level of behaviour

"refreezing" on the new level

The state of "non-change" can be understood as a situation in which the forces to attain (or avoid) something are held in equilibrium by equally strong forces, that hinder the person to act (driving and restraining forces). Change of behaviour then, can be instigated and directed by changing the force-field, i.e. by adding or strengthening driving forces and/or by eliminating or weakening restraining forces.

Example: The goals provide driving forces. But not knowing what to do hinders action (restraining forces). Information on possible courses of action (enlarging the cow-shed, of taking up additional work outside agriculture) discussion of probable outcomes as well as the necessary steps to be taken and advice how to proceed when a certain decision is arrived at may reduce the restraining forces so that problem solving action can take place.

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3. CHOICE OF ALTERNATIVES (Lewin, Escalona)

Perception and evaluation of alternatives take into account:

V^+ (in case of success) x P (probability for success)

+

V^- (in case of failure) x P (probability for failure)

The comparison of alternatives is based on the perceived attractiveness of an alternative in case of success and the perceived negative consequences in the case of failure times the expected probability of success and failure.

Example: Enlarging the cow-shed may be very attractive for the farmer (V^+ in case of success), but the possivle loss and the risk of the whole farm if the milk-prices fall considerably below the levels expected are felt so strong (V^- in case of failure) that the alternative of outside-work is - as a whole - more acceptable, even when the work outside seems not to be verry appealing.

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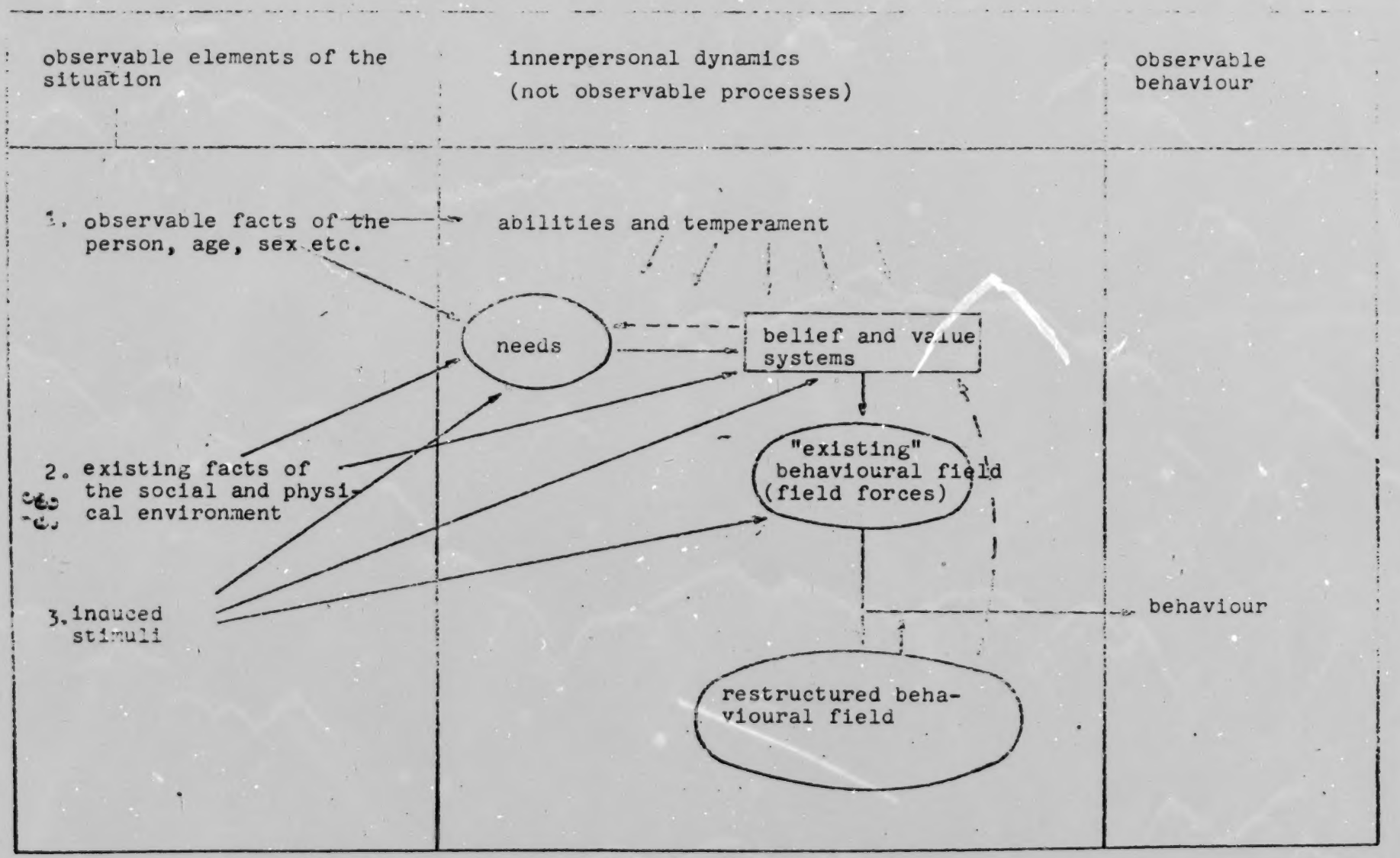
4. OBSERVABILITY OF RELEVANT FACTORS (Tolman)

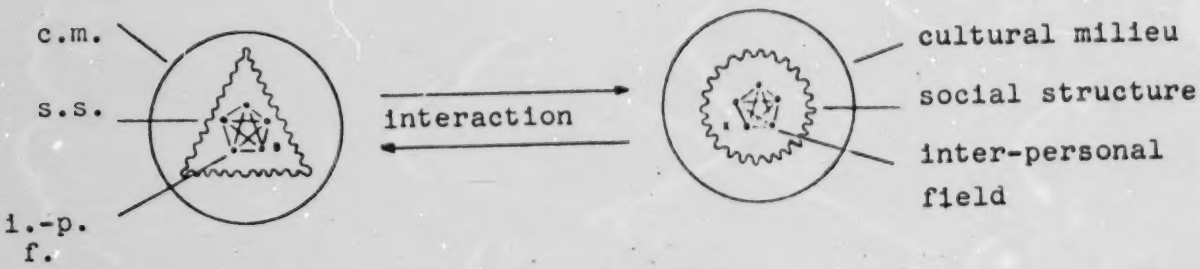
see enclosure

Innerpersonal processes can not be directly observed. But sensful observation of verbal and non-verbal behaviour can in most cases provide sufficient information in respect to needs, values, goals, knowledge, perception of possibilities and risks on the side of our clients - and by this provide hints for leverage points in extension and advisory work.


observable elements of the situation
innerpersonal dynamics
(not observable processes)
observable behaviour
1. observable facts of the person, age, sex etc.
abilities and temperament
needs
belief and value systems
"existing" behavioural field (field forces)
2. existing facts of the social and physical environment
3. induced stimuli
behaviour
restructured behavioural field

Example: The discussion of alternatives (cow-sheds or outside work) can remain fruitless, if-for instance - attitudes and values block the farmer emotionally to take them into account. These attitudes and values are not observable as such but the verbal and non-verbal reaction in the course of discussion can provide sufficient hints to become aware, that blockages may exist.

5. INTER-SYSTEM-MODEL (Chin, Lersch)



Individual behaviour (action and reaction) is always already "embedded" in larger relationships which influence behaviour (inter-personal field, social structure, cultural milieu).

Intersystem-orientation focusses the attention on the interdependencies of factors within and between the systems. By this it does away with easy explanations (like: the clients are not willing etc.) and leads to a systematic analysis of possible reasons: "Faults" or"hindrances" can exist at any place in the inter-system-complex. "Failure" than can be seen as a gain in information (real response in relation to the response expected, according to the analysis of situation and assumptions on which action has been based).

At the same time the inter-system-model can serve as a general frame of orientation that allows us to place and use partial models in the relevant context. Partial concepts -

often used - are for instance: Field theory (for the behaviour of clients as well as change-agents), cultural background of behaviour, social norms, social structure, group-dynamics, interaction, communication, learning theories, decision-making, problem-solving behaviour, adoption and diffusion, sociology of complex organizations etc. In this way the inter-system-model represents a "family of models" (Emery, 1962, p.64) in which each single model clearly has its own area of relevance, standing in a systematic relation to other models related to behaviour and change of behaviour.

For purposes of work in other cultures (developing countries) the model can be used to integrate much of relevant cultural-anthropolgical research. Very helpful in this respect seems the orientation of Goodenough (1963) that any culture comprises:

> percepts and concepts, by which people organize their experience of the real work
> beliefs in respect to cause - and effect-relationships
> value-systems
> operational procedures for dealing with people as well as with material things.

I found this orientation, that goes back to the factors that determine behaviour and structures our view to an inter-system-model extremly valuable and useful. For illumination a very few examples:

1) Why are innovators often teased, laughed at or sanctioned against by the other members of the social system? From communication theory alone there are no good explanations available (a local experimenter should not be blamed). But from the view:

Disturbing the equilibrium of the individual force-fields it is fairly clear what happens: Defense-reaction - saving face - gaining time.

2) Innovations that affect norms lead to processes of confrontation and polarization within social systems - a fact rarely tapped by diffusion-research. Why? concept of "information tickle-down" and the research methodology taken from successfully finished diffusion processes ("S-curve") blinds out other cases (behaviour of researchers in extension-research) - a way of tension reduction (with dysfunctional effects).

3) Why meet the same recommended innovations often completely different reactions from the farmers? Better seeds and use of fertilizer may - even if the chances for success may be good-lead to a risk of the very existence if the farmer is poor and dependant on water. In South- and Southeast-Asia such a farmer often can get a credit for seeds and fertilizer only within the moneylender-merchant-system+) will take the crop as security and set the price more or less at will. At the same time the farmer probably depends on a water-distribution-system in which he has no influence in respect to decision-making. Under such condition even "simple" innovations can lead to a perception of risk in case of failure (V^-) that blocks adoption (see: Choice of Alternatives)

4) What did it mean, that the bulk of the middle and higher positions in the Indian Community Development Service had to be filled with officers coming from the Indian Administrative Service? Orientation and behaviour in respect to subordinates (the Village Level Workers) were dysfunctional for advisory extension work. (See: inter-system-model)

+) and in case of need for food until the next harvest is ready the money-lender merchant

Summing up:

1) Field theory provides a concept by which to analyse the complexity of very different real-life situations in respect to forces which determine behaviour
2) Field theory explanes change as well as non-change from the same basic concept.
3) Therefore analysis of situations, planning activities to introduce and direct change als well as evaluation of activities can be developed from the same basic concept.
4) Field theory is not an excluding alternative to other theories in the social sciences, but rather a concept that allows for the organization and integration of existing knowledge into the perspective of intentional change.
5) Field-theory- by looking for the forces relevant in respect to a given problem - allows to overcome the traditional borderlines between disciplines (economics vs. social sciences etc.) for the sake of an principally unrestricted analysis of the problem-complex at hand.
6) Intersystem-orientation leads to focus attention on the whole interdependent complex of factors in extension - work.
7) Intersystem-orientation allows systematic integration of specific (partial) models into the whole complex of interdependencies.

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Dr. A.W. van den Ban

EXTENSION RESEARCH POLICY

Helsinki, September 27, 1973

I have been asked to speak about extension research policy and to focus on the manner and extent to which extension research should be included in a curriculum for extension education. The intention is that I will first give a general discussion of this topic based on my ten years as head of a department of extension education after which Röling will present some of our ideas on problem solving research based on a research project in which he has been involved for the past two years.

In curriculum planning,we start with an analysis of the jobs our graduates are likely expected to take. We try to determine what capabilities they should have in order to fulfill these jobs properly. One finds university graduates, who studied extension education, in three kinds of jobs:

1. Extension officers and administrators of extension organizations. Perhaps these two positions should be clearly distinguished, but at present this is not done at our university.

2. Specialists in extension methods, who can give preservice or inservice training in extension methods and who can advise on the methods to be used in an extension program.

3. Extension research workers, social scientists specialised on extension problems.

Let us look at the curriculum requirements for each type of job in turn, starting with the extension officers. They should, first of all, know what to teach. They need a thorough training in plant pathology, farm management or some suchlike subjects. Only in the second place do they, to my opinion, need a training in extension education. It is hard to say what should be included in such a small extension research project for three reasons:

a. a basic objective of our extension training is to change the student from a message orientation to a client orientation. We believe that it is essential that the extension officers start with the felt need of the clients and with their view of the problem. This cannot be taught through books or lectures. A little can be done through laboratory training in discussion techniques, but interviewing farmers has often quite an impact on the students attitudes. My impression is that the farmers are more willing to discuss their views with a student who comes to learn from them than with an extension officer of whom they expect that he comes to teach.

b. An extension officer will have to cooperate with the extension research workers. He will have to read their reports and sociological studies of their clients. I believe that he will read these reports more critically if he has done some research himself. He will ask them to do research for sound program planning and for evaluation. Cooperation in research planning and interpretation will be more effective if the extension officer has some basic understanding of social research, an understanding which he can gain in his own research project.

c. At this moment the Dutch extension officers do very little extension research themselves but one wonders whether their program planning and evaluation would not improve a good deal if they did some. Program planning is now based on a lot of statistical and farm management data on farms and hardly any information on the farmers, their knowledge and attitudes, their goals and plans for the future. A lot of people say that it is useful to evaluate an extension program, but very few do it. Should the normal extension officer have some training in research methods in order to do some of this research himself?

In our Department there is no course in social science research methods. These courses are taught by capable people in the sociology departments, but few students who plan to become extension officers take these courses. They usually read a book on this subject and discuss their project with our staff. We do not have time to teach these courses ourselves and probably we would get difficulties with the sociology departments if we enter their field. Is this the right solution?

There are plans at our university to switch from a 5 1/2 year curriculum to a four year one. It is doubtful whether such a short curruculum will allow sufficient time for the studens, who plan to become extension officers, to do any extension research. Even in the present set-up some of our students only take courses and laboratory training, but don't get any experience in extension research.

2. Let us now turn to the specialist in extension methods. In educating him; we give considerable time to laboratory training in different extension methods,

especially dialogue and group discussion. Extension officers experience this kind of training as quite helpful. In addition most of them also get some experience in extension research. I expect that the interest among these students for research experience will increase in the future, because the work of Röling in Kenya shows that one can play a very useful role at the borderline between a specialist in extension methods and an extension research worker. In the past we have mainly worked with conclusion oriented research, for instance most of the diffusion research. This research has been helpful to understand how society is organized and why. However, this research has been only of limited help in attempts to change society. A typical illustration of most past research is that there are about 300 studies in which the adoption index has been correlated with the educational level of the farmer or other client, but as far as I know only two studies in which the effect of the educational level of the extension officer has been studied. This last kind of research might be more useful, because it is easier for an extension administrator to change the educational level of his own staff than to change the educational level of the farmers. What we need, in our opinion, is decision oriented research, which provides the extension officer with the information he needs to make sound decisions. This requires a close cooperation between the research worker and the extension officer in order to analyse which decisions have to be taken, among which alternatives we can choose to solve the problems of the extension officer and what are the consequences of each alternative. The assumption here is that extension officers are willing to make their decisions as systematically as possible and to be explicit on the political factors and values in their decision making. I will not

go more deeply in the nature of this problem solving or decision oriented research, because Röling can do this better.

I believe that this kind of research can be of much help in improving the program planning of our extension service, but it might require that the extension officers themselves are trained in this way of thinking.

3. And that brings us to our third category: the extension research worker. People who plan to make a career as full-time extension research workers usually have a social science background. They will have done their courses in research methods in a department of sociology, psychology or andragology, but you cannot become a good research worker only by following courses and reading books on research methods. In addition, an apprenticeship is necessary, that is, doing research under the guidance of a more experienced research worker. Our problem is at present that the number of students interested in extension education is increasing so rapidly, that nearly all our time goes into teaching and the work in several committees. I think that, in a well organized department of extension education, the senior staff should have about a third of their time to do research in which some junior staff members can participate fulltime. We have not yet been very effective in our communication with the university administration to convince them of this point of view. I would be glad to hear from you how we can become more effective communicators in this important area.

University graduate should not know a lot but be able to find new solutions for problems. Question for discussion Question for examination, evaluation criteria

Evaluation courses: learn more from discussion than from lecturing,organization better than diffusion.

Extension research workers

Extension officer
Extension administrator

Client orientation
Cooperation with research
Evaluation data for program planning

Specialists in extension methods

Implementation of research findings

Problem solving research

LANDBOUWHOGESCHOOL WAGENINGEN
AFDELING VOORLICHTINGSKUNDE

PROBLEM SOLVING RESEARCH: A STRATEGY FOR CHANGE

by

Dr. Niels Röling

Paper presented at the International Seminar on Extension Education, sponsored by the W.K. Kellogg Foundation, Helsinki, 24 - 28 September 1973.

PROBLEM SOLVING RESEARCH: A STRATEGY FOR CHANGE

Van den Ban has already alluded to the topic of my presentation. I would like to deal with problem solving research as an alternative to regular social science research because Van den Ban and I believe this approach to be potentially much more fruitful for the development of a body of knowledge on effective extension communication than the regular approach.

Most countries are increasingly faced with problems which can only be solved through planned social change. Many of these problems are caused, not so much by a deteriorating situation, but because more and more situations are being considered as unacceptable, if not a disgrace for the country concerned. A typical example is the US which has, in the past decade, come to regard unequal racial opportunities, slums, etc., as unacceptable and disgraceful to the richest nation in the world. It has mounted vast programmes, very adequately staffed and financed, to tackle such problems.

And that is when it became clear that we completely lack the social technology to remake people and situations. I took the US as the example because that country has probably the best financed and trained, and the largest, army of social scientists in the world. Yet American social scientists were unable to ensure that the welfare programmes of the "Great Society" succeeded. The programmes were largely scrapped because of lack of impact.

It is equally shameful for social science research that extension services in developing countries each work with their own rule-of-thumb approaches to rural development, simply because there is no set of proven strategies which can be replicated.

And so on and so forth.

In short, I think we can safely say that most social science research has sofar not been able to provide us with experimentally tested prototype strategies for social change.

There are, to my opinion, several reasons for this sad state of affairs. (1) In the first place, social scientists have usually aimed at reaching conclusions about society instead of at methods for changing society. One result of such an orientation is that research reports dwell at length on the relationship between variables which are not manipulable. It may be very interesting for me to know that a peasant's degree of empathy is related to the extent to which he is exposed to mass media, but I can't do a thing with this information. I have personally experienced the severe frustration of having to write the chapter "implications for change agents" for a report on a million dollar research project in Nigeria and not being able to say more than such well-worn platitudes as "change agents should work through opinion

leaders". We simply had not studied enough manipulable variables to be able to say: "if you do X, there is a likelihood that Y will happen".

(2) A second problem with most regular social science research is that it is not experimental. That is, it usually stops at the quantitative survey stage and can thus only draw conclusions about "current practice" and never about what would happen if one tried to change current practice. And thus one ends up with such idiotic recommendations as "since we found opinion leaders to have high contact with extension workers and with other farmers, they form a link for multiplying the effect of the extension worker. We therefore recommend that extension workers concentrate on opinion leaders"..... Which the researchers just found to happen already. In other words, such research recommends that what happens should happen, while it can never go beyond current practice because it did not gather data on anything beyond current practice.

Thus social science usually studies non-manipulable variables in current practice and the result is of little use to people like us who seek to develop effective strategies for social guidance.

(3) There is a third problem with ordinary social science research. The bulk of it is carried out to serve the purpose of improving the status of the author in the academic community. This means that most of such research tackles problems which derive from the theories, models and paradigms of other social scientists (we hardly have our own "building" yet), and not from pressing social problems. One gets a sense of ridicule if one sees a class of Kenyan sociology students memorising the distinction between "Gemeinschaft" and "Gesellschaft" which, to my opinion, has never improved the life of anyone. But since the students have memorised it, and since they need to write their PhD theses, one shouldn't be surprised to find that someone spends years to work with these concepts instead of tackling such pressing problems as: "how do I improve the repayment rates of small farmer credit?".

Since the problems of most social science researchers are generated by other social science researchers, they are often of no interest to the policy maker. Talk of "ivory towers" soon emerges and researcher and practicioner, who should be colleagues in working towards a better world, are, in fact, more or less permanently alienated. Another consequence of deriving problems from theory is that the researcher usually takes a mono-disciplinary view while "real problems usually require a multi-disciplinary approach.

As you can see, I am taking a rather strong stand. Put one has to. Research grants are given on the condition that one "follows the leader" and are supervised by members of the academic community which makes it very difficult to break through the established traditions. I hope that my piece may be used by some of you or your co-workers to back up their intentions to do some, what I consider, useful research.

And that brings us to the point. What is the alternative to what we have called "regular social science research"?

The research approach we advocate can be called problem solving research or dicision oriented research. It aims at solving social problems, at devloping proto-type solutions which can be replicated by the practicioner. That is, the goal of problem solving research is not to gain knowledge which improves theory, but rather to gain knowledge which can improve the outcome of a project, i.e., knowledge about effective means to reach a desired state or objective. Where regular social science research aims at conclusions, problem solving research aims at decisions, at recipé's for action.

It will be immediately obvious that one has to go beyond current practice to gain knowledge about effective means to reach a desired state. What one needs is small-scale experimentation with alternative approaches to solve the problem, so as to end up with a replicable proto-type for policy makers. "Experimentation" here does not refer to the rigorously controlled experiments in a laboratory where the effect of one action (experimental treatment) on the environment is assessed. What we are after is to test the comparative effectiveness of packages of experimental treatment (programmes, projects, or strategies), which have the desired effect as a package. Perhaps it is better to speak of "proto-type development and testing" than of "experimentation'. A disadvantage of this approach thus is that one does not know the contribution of each treatment in the package or strategy (say a combination of farmer training, credit and input provision), but the advantage is that one ends up with a strategy or package which "works", i.e. which can be used to achieve a policy objective. Instead of rigorous methods to gain knowledge on trivia, one thus uses less rigorous methods to solve relevant problems.

Sofar we have only indicated the broad character of problem solving research. You may, in fact, have wondered how such research should be carried out. In the paradigm on the following page we have attempted to indicate the major actors and their functions in the process of problem solving research.

PARADIGM: THE PROCESS OF PROBLEM SOLVING RESEARCH

SOCIETY	POLICY MAKER	PRACTICIONER	RESEARCHER

PROBLEM → POLICY OBJECTIVE

↓

IDENTIFY DEPENDENT VARIABLE AND ITS DESIRED VALUE

↓

discuss — RESEARCH QUESTION: WHICH MANIPULABLE VARIABLES AFFECT THE VALUE OF THE DEPENDENT VARIABLE?

↓

discuss — BASELINE STUDY TO:

1. Define and operationalise the dependent variable;
2. Measure benchmark value of the dependent variable (for evaluation);
3. Identify and measure manipulable independent variables which covary with the dependent variable

↓

PRESENT AND DISCUSS RESULTS

↓

CONSIDER ALTERNATIVE POLICIES/STRATEGIES to affect the manipulable independent variables.

↓

DEVELOP PROTO-TYPE STRATEGY

↓

IMPLEMENT PILOT PROJECT TO TEST PROTO-TYPE

GUIDE IMPLEMENTATION ACCORDING TO PRINCIPLE OF REPLICABILITY; MONITOR AND RECORD EVENTS; CARRY OUT QUICKIE RESEARCH TO ANSWER QUESTIONS AS THEY ARISE ADJUST STRATEGY IF NECESSARY

↓

EVALUATION

↓

PRESENT AND DISCUSS RESULTS (revise strategy and repeat implementation if necessary).

↓

DISSEMINATE FOR REPLICATION

↓

POLICY DECISION

↓

SOLVE PROBLEM

Let us now illustrate the paradigm with the example of a project in Kenya in which I participated.

The social problem was given by the very low farm incomes in general and the considerable lag of these rural incomes behind urban incomes. The policy objective (National Plan) was, therefore, to increase rural incomes through agricultural development. Given is a large extension machinery (1 extension worker to around 400 farmers).

As problem solving researchers, our first task was to identify a dependent variable which adequately reflected farm income. Since it was difficult to measure farm income, we chose the progressiveness of the farmer as the dependent variable. This variable was measured in an index which reflected both the extent to which the farmer had adopted new enterprises and his relative earliness in doing so. In planning the baseline survey, we frequently consulted local extension and other officials (practicioners).

The baseline study identified a number of manipulable independent variables which covaried strongly with the value of the dependent variable, progressiveness. We found a strong relationship with: degree of extension contact in past year, number of visits to farmer training centers, degree of participation in demonstrations, degree of credit accessibility, etc. That is, we found a very lopsided distribution of Government services across our progressiveness categories: the services concentrated on the most progressives.

The analysis of our data was done in a very simple fashion. We only used cross-tabulations with percentages (no complicated correlations, factor analyses, step-wise regressions, etc., which the officials would not have been able to use).

The data were presented at meetings with the local officials by projecting our simple tables through the overhead projector. This presentation set the framework for a brainstorm of researchers and local officials in their search for solutions. The knowledge and experience of local officials is indispensable at this point. In our case, it was one of the local officials who suggested that we should try to develop training courses in the Farmer Training Centers in such a manner that each type of course would cater specifically for farmers in one progressiveness category. Thus the least progressiveness would receive training in a subject which would allow them to enter the money-exchange economy, while the most progressive farmers would be trained in more refined methods of production.

With this basic idea, the researchers went home and systematised and developed a plan of action. We specified that the first efforts should be

concentrated on the least progressive farmers to try and find methods for uplifting this forgotten and neglected section of the population. The plan was again discussed with local officials. Some major changes were made on the basis of their practical insight.

Local officials then mounted a pilot project to select, recruit, train, follow-up and provide with credit and inputs, groups of least progressive farmers so as to assist them in improving the production of their staple food, maize. The researchers assisted in many ways: they developed and gave special training programmes for staff members, prodded action when necessary, helped to plan action systematically, ensured that the implementation occurred in replicable fashion (no special inputs), kept a continuous record of the events and proceedings, and recorded crucial data for evaluation. They also carried out small studies as the need arose, for instance, on such topics as: "What are the characteristics of non-repayers of credit compared to payers?" and "To what extent do farmers have to sell food after harvest and buy food later when it is expensive?". Such small studies can only be done after one has gained considerable insight in pressing problems through active involvement in a change programme. The results of such studies are very useful for the policy maker.

After the implementation of a set of courses, the researchers evaluated the results systematically. The results were presented in a meeting with local officials. Decisions for change were made (a better credit package for instance). The project was then implemented a second time, new flaws discovered, adjustments made, etc. The third implementation was largely meant to show that the proto-type strategy could be completely implemented in the field by the local machinery.

After the three trials, we felt we had a basically replicable proto-type, except for the repayment rate on credit which was 80%, too low to defend a replication with World Bank money, for instance. The repayment rate will be the subject of continued trials. But we had developed a foolproof method of improving the maize production (from 4 to 11 bags per acre) of the lowest income group.

We presented our results in a meeting with top policy makers, local officials and researchers in the hope of achieving replication. We also disseminated the results on a large scale through a short, easily written and practical document. It is too early to say whether we acieved any impact. But the meeting decided to continue with trials, especially to improve the repayment rates.

From my experience, a number of points can be made about the research strategy which we followed.

1. The approach takes time (2½ years in our case) and decisions have to be made, whether there are data or not. We were frequently criticised on this point when we advocated the research method. I do feel, however, that decisions can indeed and must be made without waiting for the results of problem solving research. However, that does not mean that such research should not be carried out. One starts to accumulate knowledge for decisions in future or for decisions elsewhere.

2. Dissemination to achieve replication is a job in itself and should always be in the mind of the researcher. He should never tire to present his plans and results at seminars, meetings, etc. Here the researcher must be able to be as brief and practical as possible to convince busy top-echelon workers. The overhead projector really helps a lot.

3. The type of research described is extremely exciting and rewarding. It allows a close link between researcher and practicioner. The researcher thereby gains because he learns much in terms of the relative weights of concepts, he has easy access to the field, and his research subject. He gets much help from the local officials and farmers who see him as a helper. On the other hand, there is a danger of becoming too involved, of wanting to help the project succeed with non-replicable inputs.

4. The project gains its own momentum and has its own time schedule (planting dates for instance). Sometimes, one therefore does not have enough time to study aspects which require attention. On the other hand the same time schedule sometimes forces periods of inactivity when they are not wanted.

5. There is considerable pressure from local people and local officials to make the pilot project as such a success by whatever means and to enlarge it. That is, there is a tendency to forget the aim of achieving a replicable proto-type.

6. By being continuously involved in actual problems, the researcher begins to formulate theories which may eventually be a basis for a more relevant social science.

7. The experience of implementing the pilot project gives local officials a taste for experimentation. After the initial need for prodding, the researcher soon finds himself in a situation in which he does no longer suggest the possibilities because local officials are brimming with their own ideas. The role of the researcher then becomes one of systematisation, monitoring and evaluation.

In problem solving research, the research <u>action</u> itself and the participation of policy makers and practicionersin it, becomes the tool for change, and not the <u>product</u> of research (i.e. the unread research report).

8. I foresee that, when the results of a considerable number of such projects have been accumulated, one can start to develop recipé's which can be replicated on a large scale. One would thus be working towards a systematic kookbook, for instance, for extension services in developing countries, which now work with their own, often untried, rule-of-thumb routines and strategies.

Gentlemen, I have described a proto-type problem solving research project. I hope I have given you cause for replication.

OBSERVATIONS ON OUR EXPERIENCE IN EXTENSION EDUCATION

G. L. Carter, Jr., University of Wisconsin

In our experience in extension education we have succeeded with such things as the following:

1. We have focused attention on the fact that extension can and should be an educational endeavor.
2. We have provided formal programs of study for a fair number of extension workers who are reasonably prepared to apply certain kinds of knowledge to extension-type problems.
3. We have contributed to a growing realization that extension work can be legitimately pursued as a career.
4. We have focused attention on the need for continuing and more systematic training for extension personnel.
5. We have demonstrated that problems that exist in extension organization, staffing, programming and other related matters, are legitimate subjects for and subject to systematic investigation.

We have not succeeded in such matters as the following:

1. We have not succeeded in having all extension work viewed as extension education.
2. We have not adequately integrated what I have referred to as the behavioral component of the extension worker's job and the technological component in our inservice training or formal extension education programs of study.

Paper prepared for the International Seminar in Extension Education, Helsinki, Finland, September 24-28, 1973.

3. We have not sufficiently defined the nature of the job of the extension worker and, consequently, adequately conceptualized what a program of study in extension education should be.
4. We have not succeeded in having extension workers view their clientele as learners and to carry on their work primarily as facilitators of learning.
5. We have not designed inservice training sufficiently adequately that it has optimum impact on the trainee as he functions on the job; nor have we designed our formal programs of study so participants are able to connect what they are studying to what is required of the professional.

No doubt there are other things we have succeeded in doing--as there are others we have not succeeded in doing. I will not attempt to deal with all these items in this paper. First, I would propose that the greatest contribution of extension education to date is that of helping focus attention on the need for continuing and systematic training throughout a career in extension.

I consider two closely related deficiencies as the major ones. One is our failure to adequately assist personnel in viewing clientele as learners, rather than as receivers of information. The other is our failure to adequately define the nature of the extension worker's job and consequently conceive of what a program of study in extension education should be.

I wish to devote the major attention of this paper to an analysis of these major deficiencies. I will propose a way of defining the job to be done. This definition will serve as an orientation to outlining a way of conceiving of a program of study.

Background to the Deficiencies

We quickly recognize one characteristic of extension workers when we begin attempting to provide any type of training. They are highly action oriented. That orientation gets translated into a desire to be provided with training in "how to do." They want answers to questions. They want ready-made procedures to follow. They want a prescription to follow, regardless of how involved or complicated a process may be.

Traditionally extension workers have been able to survive on having readymade answers to questions and problems. That facility was reasonably adequate as long as problems were relatively uncomplicated--at least they could be treated as if they were. The readymade answers derived largely from the technologies of agriculture and home economics.

Historically, our training for extension workers has followed something of the following pattern. When we had new answers to some questions being asked (or that might be asked, or that needed to be asked) we called extension workers together and provided them with the new answers. They were expected to go forth using the new answers at appropriate times.

When we started concerning ourselves with matters other than the technologies of agriculture and home economics, we proceeded trying to do the same thing--to provide the worker with answers and procedures (prescriptions). When we first started concerning ourselves with content for training in matters other than technology we called it extension methods. The idea seemed to be that if we could provide the extension worker with better ways of giving answers we would improve his functioning on the job.

This attention on extension methods is exemplified by the widely distributed publication by Wilson and Gallup. It was called Extension Teaching Methods (Extension Service Circular 495, August 1955, USDA). It would be inappropriate to imply that such attention to methods did not make a useful contribution. It did. However, the way it was typically handled did not change the orientation of the worker. He still expected answers and prescriptive procedures.

Attention to extension methods appears to have been the forerunner to extension education as a program of study. Extension education came to be thought of as a particular kind of a course of study--one that focused attention on methods, on program planning, on extension philosophy and such matters. It was thought of as dealing with what I have referred to (in the paper "Facilitating Learning in Inservice Training") as the behavioral component of the extension worker's job.

Preparation for the technological component of his job was an entirely different matter--something other than extension education. And the extension worker has been exposed to training as if these were too entirely different matters. Herein lies part of our problem in extension education, in my judgment. We have allowed subjects dealing with the technological component of the job to be dealt with separately and to be thought of apart from the behavioral component. Consequently, we have been less than as effective as we might be in designing training programs in either area--whether preservice, on-the-job or in postgraduate formal courses of study for practicing professionals.

In fact, this separation has become so pronounced in the U.S. that some extension administrators have decided that what we have tended to call

extension education really has no useful contribution to make to the training of their staffs. They contend that what is needed is more subjects dealing with the technological.

I contend that neither training in the behavioral component (the so-called extension education) nor the technological have been adequate. Neither has been or is adequately being dealt with in the context of the job--what the professional is expected to do with what he knows.

I believe those of us in extension education can have an impact on extension--substantially more than we have had to date. But if we are to have that impact we must first revise the traditional notion of what education is. Typically education is thought of as what goes on in the classroom. A notion prevails (especially in universities) that we prostitute education when we attempt to deal with anything that has utility in the real world (when it is something "practical"). A notion prevails that education results from the "learned" telling the "ignorant" what they ought to know.

As a matter of fact, we can observe many (perhaps most) extension workers dealing with their clients from such an orientation. By various means the clients are told "what they ought to know." That is all right if the client (the learner) has asked a question, and what he is told is in answer to that question. But what if he has not asked the question? Worse yet, suppose he has never thought of the question.

Let me see if I can capsule the background I have been attempting to develop. We have not succeeded in providing training that is sufficiently recognizably related to the job to be done. We have extension personnel (our trainees, our students) who are highly action oriented. They see their jobs as doing things. When it comes to getting training they want answers

and procedures to follow. That was sufficient in less complicated times, especially so long as we only thought of technology as appropriate content to be learned. When we began concerning ourselves with training for the behavioral component of the extension job, the worker still expected to receive answers and procedures. We tried very hard to accommodate him. That has not worked too well.

It has not worked too well for two reasons:

1. In matters of the behavioral component of the job we don't have answers and prescriptive procedures.
2. The job of the extension worker has become more complex. The problems he must deal with are more complicated; often such problems do not have answers.

How then can we help the extension worker conceive of his job in such a way that he looks for and expects to be trained as a professional--one who must use what he knows in dealing with problems he faces, rather than one who has preconceived and predetermined answers? How can we help him recognize that what he needs most, in both the technological and behavioral components of his job, are "ways of thinking" that will make it possible for him to design his own procedures and to sort out relevant information that may apply to problems he may face?

I have some ideas I would like to share. Perhaps they will stimulate your own thinking so you will come up with even more logical and potentially useful ideas.

A Conception of the Job

First, we must emphasize that extension workers are practicing professionals. It is not adequate that they profess (as does the university

professor) on certain subjects. What they know must be used in assisting clientele to cope with real-to-life problems. Neither can the extension worker be a technician: one who simply has answers and procedures to be followed.

We have examined what goes on in the performance of the jobs of extension workers fairly systematically, both in the U.S. and in Ireland. We have evidence from these studies to confirm our notion that the job is a complex one--that it really requires professional performance. Our evidence confirms that there are both behavioral and technological components to the job. It also confirms that, for at least those presently on the job, performance of the behavioral component is more likely to be characterized by them as critical to their success than the technological component.

We attempted to develop curriculum for the program in Ireland (The Kellogg Agricultural Extension Centre) around the following conception. We said that the extension worker (the extension educator) should increasingly become and come to view his role as that of being an <u>astute student of his work environment</u>.

Being a student means he never knows all he needs to know; that he is constantly grasping and groping for additional insights. Being astute means that he must become increasingly skilled at determining what he should give attention to as he attempts to learn from his work. To be a student of his work environment means that he makes his work situation an actual laboratory for learning.

That would mean that he could never be one who would rely on pre-conceived, prescriptive answers; that he must look upon each situation as new; that he must utilize his intellectual and other powers to sort out the significance of each problem situation as a fresh, new problem--one the likes

of which he has not faced before. It does not mean that he would not look for things in common between problems. It means he would view the commonalities in perspective, judging their potential influences and impacts on each situation as it exists (to the best of his ability to determine).

Basis for Conceiving of a Curriculum

What can a person learn that could help him become such a practicing professional? To get a perspective on that question let me suggest the basis we have been using for conceiving of a curriculum for the education of professionals. As I have said, the professional must function in the real world. He performs in a job in which there are problems to be dealt with. He must bring something to bear (knowledge, insight, skill, attitudes, values--whatever you would call these things) if he is to render a service. Perhaps I can illustrate this as one abutment to a bridge. I'll put this abutment on the right end of the bridge (see Figure 1).

At universities and in other institutions there is knowledge available and other knowledge being sought, sorted, conceptualized, stored, transmitted. Let me represent these sources of knowledge as the left bridge abutment. What the professional needs is somehow to be able to span between these two abutments--to connect the two in relation to the job he must perform.

Helping him build the span is our job as curriculum developers and trainers. We must develop curricula that will enable the student to acquire those things (competencies) required of the professional. We must identify the "things to be learned" and determine processes by which that learning might be achieved. This bridging is represented in Figure 1.

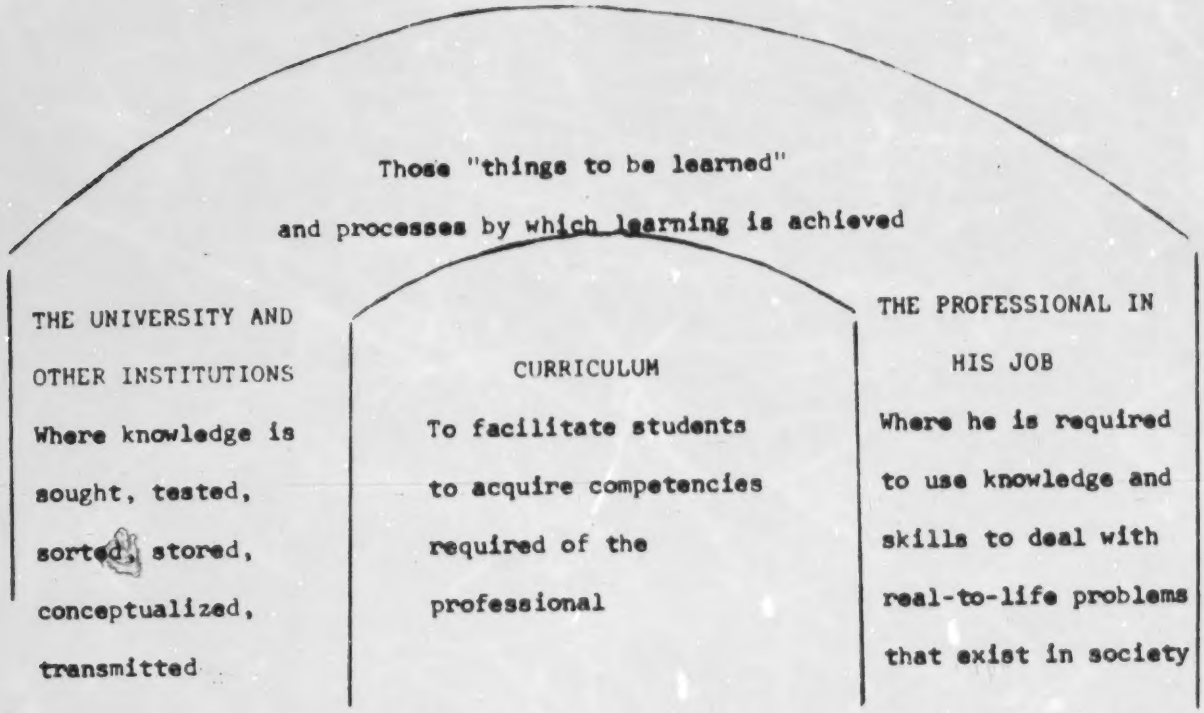
Those "things to be learned"
and processes by which learning is achieved
THE UNIVERSITY AND OTHER INSTITUTIONS
Where knowledge is sought, tested, sorted, stored, conceptualized, transmitted
CURRICULUM
To facilitate students to acquire competencies required of the professional
THE PROFESSIONAL IN HIS JOB
Where he is required to use knowledge and skills to deal with real-to-life problems that exist in society

Figure 1. A representation of bridging between the sources of knowledge and the use to be made of knowledge by the practicing professional.

Extension education as it has evolved has undertaken to borrow, from a variety of sources, those ideas, conceptualizations, processes, methods, that might serve the extension professional. The behavioral sciences have been the primary sources. I include education, pedagogics and the like in the behavioral sciences.

Not until the 1960's was there any systematic effort to identify what the various sources of knowledge (disciplines and fields of study) might most usefully contribute to extension education. This was in an effort called the National Extension Curriculum Seminar (U.S.).

Up to that point, at least in the U.S., extension education programs had provided some input (ideas fairly specific to extension education). However, programs of study had relied heavily on such fields as rural sociology, education, psychology and social psychology, cultural anthropology, political science, etc. Students were programmed to take courses (subjects) in such departments. Typically they were taught by the sociologist as if the extension students were studying to become sociologists. The same thing happened in other areas. Only in the specifically labeled extension education courses were students dealing with extension-type problems.

The chances are that most formal degree programs in extension education will still have to rely on inputs from various disciplines and fields of study within the university. Can we conceive of the role of the extension worker so that our conceptualization will serve two purposes--to help him focus on both ends of the bridge and integrate the two? I have been attempting to do that.

Areas of Competence

The curriculum we were assisting our Irish colleagues in developing was attempting to utilize what we have called areas of competence--areas that are tentatively judged to contribute to (1) the extension professional becoming an increasingly astute student of his work environment, and (2) the integration of the behavioral and technological components of the job.

At least for the present I have conceptualized competencies required of the extension worker as falling into five areas. We have tried these out, both in fairly systematic study and in actual practice. They have been demonstrated to have merit. The areas are as follows:

1. Coping with the work environment (milieu).

   Not only must a professional operate in an identifiable work environment, he must work and cope with that environment. My definition of the area is fairly broad. It includes political, social, cultural, economic, physical, and technological aspects (ways of thinking)--all the potentially useful systematic ways we have for thinking about what could surround the professional in his work. Note that the technological is included. This conceptualization can put the technological in perspective with other matters that must concern the professional.

2. Reckoning with human behavior.

   Most of what the extension worker does is concerned with human beings. There are systematic ways of thinking about human growth, development and behavior. These ways of thinking can be acquired through study. They appear to have relevance to the extension educator.

3. Conducting systematic inquiry.

   Much of what the professional does needs to depend upon observations he makes, his own systematic organization and analysis of such observations, his judgments as to the impact of his analysis of these observations. We call the more formal means of carrying on systematic inquiry research. However, much of the observing the professional does and must continue doing is less formal. There are ways of thinking that can assist the professional in becoming more conscious of the need for and proficient in such inquiry.

4. Programming.

   Arranging for, conducting and assessing the consequences of intended/

premeditated efforts to facilitate improvement (change) is usually considered the core of the role of the professional educator. It is no less for the extension educator. We have borrowed from education (curriculum development), adapted and created some of our own ideas in extension education, to form this area of competence.

5. Functioning as a professional.

There are identifiable ways of thinking about the role of the professional; how he conceives of his role; how he relates his role to other roles in his employing organization and to other relevant people; how he organizes and manages available resources; what it means to be and function as a professional. These ways of thinking are available to be learned and to be integrated into the professional "equipment" of the extension educator.

Perhaps I can illustrate how we have attempted to utilize these five areas of competence in developing curriculum for the program in Ireland. I will illustrate it only for those who were pursuing study related to what I have been calling the behavioral component of the job--what we have traditionally called extension education. I will represent this in Figure 2.

Note the bridge is represented as "understandings" and "how to operate"--what is required of the job. The five areas of competence are represented as a second dimension of the three dimensional illustration. The course of study or subjects are represented as the third dimension.

Considering the subjects available to be included in the course of study, we proceed to identify those "ways of thinking" that can be judged as most critical to be learned. At the same time we look at the areas of competence to see to which area(s) each "way of thinking" (each idea) might relate; how the way of thinking could help strengthen that area of competence.

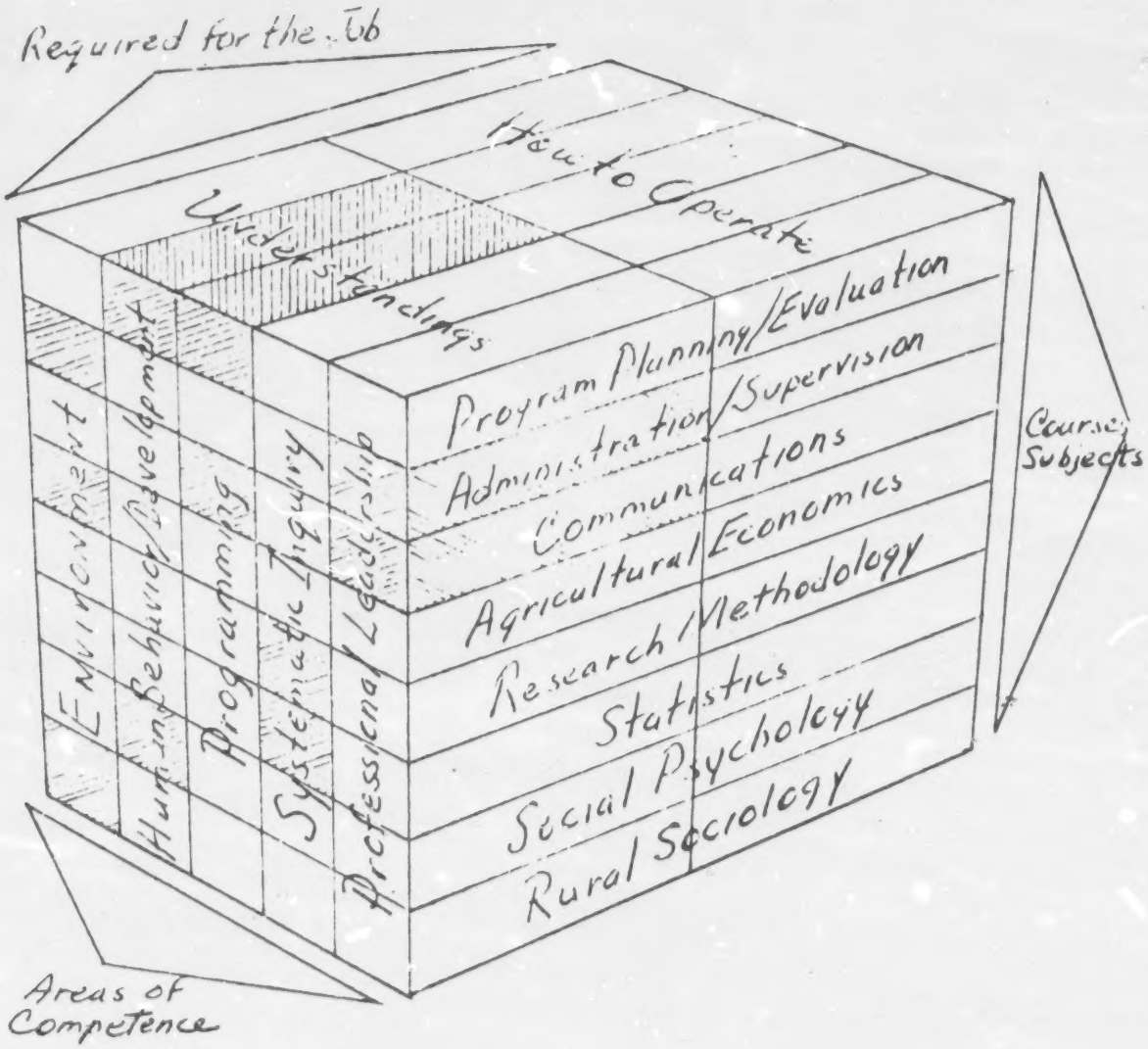

Figure 2. Representation of a way of conceiving of a relationship between what is required for the job, areas of competence needed by the professional and sources of knowledge (subject-matter/a curriculum/courses).

By shading we have suggested, for example, that rural sociology can contribute ways of thinking that will improve competence in the area of environment. Social psychology will contribute ways of thinking that will

strengthen competence in the area of human behavior. Statistics can contribute ways of thinking appropriate in systematic inquiry, etc.

The challenge we have as developers of curriculum in extension education is (1) identifying those critical things to be learned (from some conceptualization such as I have suggested), and (2) organizing learning experiences that will assist our students to acquire these "things to be learned" in the context of the job they have to do.

Conclusion

I am suggesting that by such thinking, probing, trying out ideas, revising in light of what we learn, we will eventually be able to develop an adequate area of study that can be called extension education.

One of the most innovative things presently on the scene in American education is what has been accomplished by a high school English teacher. In order to cope with boredom among his students and signs of revolt to his then traditional approach to teaching English, the teacher had an idea. How about the high school students producing a magazine! Since they lived in rural North Georgia where many of the old ways of life were about to be lost forever, why not a magazine that would capture the rich culture of the rural mountain people? That they did.

A best seller book resulted from a collection of some of the published articles in that magazine. Teacher Wigginton edited the book. It is called The Foxfire Book (published by Doubleday & Co., 1972).

I can think of no more fitting conclusion to this paper than a sentence from the second page of Wigginton's introduction to that volume: "Those who cannot remember the past not only relive it; they tend to impose it, mistakes and all, on others."

Comments on International Seminar in Extension Education (Sept. 24-28,1973) with Special Emphasis on the Friday AM Session

G.L. CARTER, Jr. University of Wisconsin

Friday AM Session (my presentation):

At the conclusion of the Friday AM session I made some observations on what had happened during my presentation and what I judged to have been the consequenses. I wish to comment further, I wish to illustrate what may be an explanation of why I missed an excellent opportunity to make an adequate contribution to the seminar at that time. I do this not to excuse myself. However, the experience affords an excellent opportunity to illustrate what I was discussing at the Thursday session.

The situation on Friday morning was as follows:

1. I had been given a topic on which to prepare a paper and make a presentation

2. I had distributed the paper in advance with the expectation that it would have been read for that paper I attempted to develop some perspective on experience in extension education in the USA as background for a conceptual formulation on which I have been working. This was being done in an attempt to explore possible conceptual formulations that may be more useful than existing ones as basis for developing curricula.

3. On the basis of the paper, I had prepared "something to present" to the seminar.

You know as well or better than I what happened. I wish to use my inadequate contribution to illustrate a problem many of us have in facilitating learning. The session would have been a substantially different one if, instead of making a presentation, I had asked myself the following questions Thursday night or Friday AM:

1. What are seminar participants interested in learning at this point?

2. What is possible to be learned in the time and under existing circumstances?

3. What activities can learners be helped to engage in during this time that might lead to the desired learning?

Here are some clues I would have considered had I asked myself the preceeding questions. This will illustrate possibilities:

1. It had been made abundantly clear that participants were interested in discussions of the more concrete. There had been a disproportionate amount of time devoted to presenting and discussing conceptual ideas (abstractions)

2. There were numerous clues that participants were interested in specific clues about how to develop curricula

3. One specific suggestion had been heard: some participants were concerned with and interested in developing curricula for socio-economic agents

Among the things I might have done that could have been more useful:

1. At the start of the session I could have asked if the paper had been read in advance. If so, were there questions to be raised that might be profitably discussed

2. Presented the idea of trying to connect what the job require and what is known (sources of knowledge) and stopped for questions and discussions

3. Asked for suggestions as to how the time might be usefully utilized

4. Taken a clue from the expressed desire of some to consider how to develop cirrucula for socio-economic agents and used that interest as the basis for a discussion on how the development of curricula might be approached.

The above ideas would have been triggered immediately had I asked myself the three key questions I have suggested. A useful procedure I could have used in advance of the session would have been to seek expression of interest from a few individuals on what I might contribute. This could have been done Thursday night or Friday morning.

Seminar in General

As already mentioned, as far as most participants were concerned, there was a disproportionate share of time devoted to conceptual (abstract) ideas. In my judgement, it is not a matter of either concrete or abstract but a satisfactory and useful combination of both.

The difficulty in preplanning such a seminar are recognizable. With no previous experience with the group it is difficult to identify what interests will be. The desire to have a fairly well developed, prestructural program can lead to such difficulty. It is difficult to know "where participants are" (the problems they are working on, their interests, etc.)

Some difficulties were experienced in organizing the discussion activities. Lack of experience together can probably account for such difficulties. We each bring our own experience, our ideas of how things should be done, etc.

It is possible that expectations of what could be accomplished in a one-week session were somewhat unrealistic.

Suggestions for Consideration in Continuing Sessions

In order to deal adequately with concrete example and consider conceptual (abstract) ideas that may help generalize from the concrete, it appears desirable that projects be undertaken by various programs as the basis for next session. Since such projects are unlikely to be activities that are completed in one year, the approach of using experience with specific projects (designed experiences) might be thought as a possible basis for a continuing series of sessions If this should be done, the series of sessions could more appropriately be thought of as a workshop than as a seminar. I would strongly recommend consideration of this possibility.

In terms of procedures the following might be considered:

1. Initiate planning for next session by January 1, 1974

2. Seek specific commitments from each program on what will be presented as a project at the 1974 session

3. Identify a program committee responsible for making plans. Maurice Rolls has already been asked to be responsible for arrangements.

4. Outlines, at least, of what will be presented as projects be sent to the program committee by June 1, 1974 in order that program can be developed.

I would judge the seminar (1973) to have served a very useful purpose. I am pleased to see that a decision was made to continue such sessions (perhaps on an annual basis). I appreciate the opportunity to have participated in this first session.

GROUP REPORTS

How design learning experience?

Elements:

Job analysis

determine activities
which can be improved
through training

Resources
(people, gimmicks, subjects)

Synthesis
into course plan

So: Questions

1. How job analysis?
2. What is manipulable through training?
3. What resources used, how determined
4. Cooperation of centers to improve resources
5. How come to synthesis?

1. JOB ANALYSIS

Problem: which job: now, future job (career analysis)
new job (role education)?

Sources of Information

1. Teacher observes (problems: his presence, own values, weighting or anecdotes)
2. Feedback last course
3. Job description form before course
4. Discussion group future trainees or subgroup
5. Course co-ordinator (who does it for you)
6. Former-student (alumni) group
7. Build job analysis into course
8. Let students program course themselves
9. Boss of clients
10. Subordinates of clients
11. Critical incident method (ask of future trainees)

2. WHAT MANIPULABLE THROUGH TRAINING

Problem: train people management does not allow to be redeployed so as to use new abilities
Instead: full in-tray

So: train all levels or none (Shell)

How make training more acceptable to top?
- involve top in determining training needs
- in planning training
- in training itself

Training aspect of management.
Let this be recognized + institutionalized
e.g. appraisal interview

Now we determine problems, training needs, etc.
Too much deterred.

Training very expensive, but benefits difficult to measure.

3. RESOURCES

Possible: big names, other change agencies, management techniques, etc.
But often difficult to make inputs fit problems

So: course leader, continuity person
(and not package of courses)
- brief guest speakers
- discuss after
- use panel with questions

Problem: How keep up with new resources.
Danger of inbreeding (use sabb. leaves?)

Points: Person more important than subject
Process more important than subject.

4. COOPERATION OF CENTERS

-swap personnel
-exchange literature of new titles
- gimmicks / methods
- send each other annotated list of 6 things considered useful for others

This cooperation to be discussed

Only start Federation if annual conventation is held in Paris

5. SYNTHESIS

Problem: need to make job analysis and provision of training equally specific.

Could use programming or evaluation as intergrating principles

Programming
- note most advisers talk of achievements in terms of arrangements, not projects
- could program by teachers + students program

Evaluation
Advisers don't do it. We don't either. No way to measure increased effectiveness advisers. Difficulty not so much method as criteria
Training: either swift or full course
No two-week evaluation course

Process:
Not known → unknown or concrete → abstract

MISCELLANEOUS

Curriculum

Org. goals - individ. tasks - content methodology - evaluation

1. ORGANIZATIONAL GOALS

a. time
b. clarification
c. question goals I level?
d. achievement team job
individual job

2. INDIVIDUAL TASKS

a. selection homogeneous
heterogeneous
b. students background
c. reasons for taking course
d. formula vs. individual development

3. CONTENT - METHODOLOGY

a. orientation - concern for student
b. teacher behavior
c. begin with relevant problem
d. cross content boundaries

4. EVALUATION

Motivational problem:

Use problem of clients for optimal motivation.
But meanwhile we have our own goals or desired behaviors. Sneaky business.

Whose job? i.e. who gets trained?

recruitment either voluntary or selective or both
Result: Capitalist system of training. Those who have get more.
Justification: progressiveness or opinion leadership. But no evidence.
Possible that training creates language and communication barriers.
What to do? OK now? or special strategies to train rest?

Homogeneity the less, the higher the level of abstraction and the less relevant for specific problems
The more: the more chance of competition, and pressure to conform

Validity
Reliability of tests

1. changing in attitudes
2. changing in practical behavior (daily working)

paper and pencil tests (those, we use at schools in common)
inquire formulas
observation
discussion with the clients

group of other instruments:
sociometric tests
attitude and interest inventories
intelligence tests
Extension as a hole, but expecially extension education handles with acticity to change his clients behavior.

How common are they and were it possible to conneet them with extension education
the person's personal possibilities to work in that and that job
Changing naturally mean , that it has happened something what take variable from which behavior consists!

a. The question of measurement in extension education
b. With which tools we can get the facts on which we put our evaluation that is by which way we get the basic knowledge on which lies the evaluation. And; how good the evaluation is.

OBSERVATIONS ABOUT DISCUSSIONS DURING INTERNATIONAL SEMINAR IN EXTENSION EDUCATION, LEPOLAMPI 24.-28.9.1973

1. Follow-up program for the ex-students

2. How much guidance from the teachers side, how much must they themselves be active

3. Thinking of critical way about extension education Students must do that.

4. University has to continue the education of former students. For instance medical doctor who hasn't got any continuing education after 1940 is a dangerous man.

5. Training students to become trainers.

6. How to convince authorities and policy makers of the importance of education in extension education.

7. Students are used to be told what they want to learn. When we say that tell you us what you want to do, they are astonished.

8. Start with the learner and not with the message and content. Due to lack of motivation, money, education people are not behaving like they should behave.

9. Using general sociologists and psychologists from university to extension education purposes is not very wise, because they don't know the problem field.

10. Seventy per cent of FAO work can be included as extension work.

11. Lack of trained people in developing countries and lack of coordination between different agencies serving in rural areas are the main problems of FAO in developing countries.

12. Extension education should be made compulsory for any person who is taking an agricultural degree.

13. The criteria to measure the successes of extension programs in developing countries.

14. There is lot of knowledge in different heads but not available for everyone. How can a former expert working in some developing country help a new expert in giving experiences and knowledge. How can one accumulate experiences of developing countries and make a frame of references of them for advisers who are sent there in future.

15. Can former FAO experts be used as contact people for those who go there and who could clarify simple problems.

16. Curriculum development. We become too much instutionalized in a department of university

17. Introductory seminar in university teaching should be organized for university teachers.

18. Intercourse with colleagues in communication problems in university.

19. Is a group of homogeneous students better than that of heterogeneous ones as far as learning is concerned.

20. It's rather important that teacher practices what he preaches i.e. he does in the told way and does as he teaches.

21. Do we use those processes which we are actually teaching ourselves in for instance making curriculum development.

22. The problem solving research differs from the basic research mainly on the facts how the research problem is stated. Methods are the same.

23. If we could add an experimental phase in correlational type of analysis we could get to know also which causes what. For example when we could use manipulative variables like contacts with extension, number of subscribed farm journals etc. to find out what their effects are in producing a higher standard of social welfare.

24. We start with the premise that if the farmers use all the existing knowledge they can make better decisions.

25. Extension agents are used to give recepies during the period of technical advising. They could go to the farmers and say that now you put 100 kg:s of fertilizer of spray with this weed killer. Nowadays when the problems are much more complex including many managerial aspects the agent should be trained to use the non-directive approach more.

26. It would be interested to make an experiment with non-directive and directive approaches in trying to contribute to changes in farmers' behavior. Which one is more effective? Why?

27. Many of the independent variables used traditionally in diffusion adoption research are not manipulative. Like personal attributes, amount of education or character of the farm holding. However in selective regression type of analysis we never know what happens: therefore we need some kind of experimental approach.

28. How to remove extension agents for giving ready made answers to higher levels of conceptualization?

29. With concrete references we can apply abstract ideas (G.L. Carters sheep example) and facilitate learning.

30. How to plan and implement a best possible learning experience?

31. Behavioral activity can be divided to three parts:
    a. Mental activity
    b. Skill activity
    c. Feeling activity

32. What would be the most appropriate environment where learning can take place?

33. Teacher gives ready made answers: facilitator of learning gives concrete references and a very short instruction.

34. We cannot think about groups as stereotypes (e.g. all small farmers are alike) but groups consisting of different individuals who have a reference group for their behaviour.

35. How much should the agent have to persuade his own type of thinking: how much should he go in line with the farmers' ideas?

36. Learning happens through the activities in which the learner engages himself?

37. Learning is a process of behaving through which we acquire new ways of behaving?

38. What use is it to facilitate a change in behavior = learning if it happens automatically without our interference through new experiences in which the

39. Communication is everything which is concerned with exchange of meaning and influence.

40. How can we make extension agents aware of the differences in behavior? How can they avoid of stereotyping people?

41. Ralph Tyler does not have a theory of education but a theory of learning?

42. To design and implement learning situations would be the main role of an extension agent.

43. How do we go about to educate an agent to do the role of facilitator of learning.

44. We have to analyse what are the different restrains we are working in our centers? Organizational, personal or other limits?

45. If the agent has something to give and sell the farmers will come to the agent after that?

46. Ninety per cent of the academic research is of no use to the practitioners.

47. How are we going to decide what the students should know about extension education? What are the process in which we engage ourselves in planning the curriculum?

48. Practicing professionals = people who meet and try to solve with real problems on the field.

49. It is hard for an effective extension agent to explain why is effective. His reply might only be: you have to go amongst them. What use do we have of this kind answer? In other words we cannot start with job description an agent conceives to be included in his job because he does not know what are the crucial elements for successfulness

50. The role of the professional in training should be great and crusial? The professional devotes his life time in trying to keep up what happens on the field. We have to start from the people.

51. What should be the balance between how to communicate and what to communicate? The balance between the subject matter and methods?

52. What are the reasons why we have failed in teaching program planning to practical extension workers? Or have we failed? How have we determined our impact has been inadequate?

53. How to train the staff of the extension education centers? What are the main inadequencies in our behavior?

54. We talked much about starting with the people and their needs in our teaching programs. However no one gave any hints how to operationalize the inductive approach. How to find out the needs?

55. 11 persons of 28 had been working as extension agents on the field. We others should out to the field and test our abstract ideas we are teaching in our programs. To work the abstractions down to specific concrete problems.

56. Thus a crucial problem is how to operationalize: how to move from and up to theoretical level from empirical level.

57. It is easier to operationalize methods than planning.

At the end of the seminar we discussed much about the continuity of our gatherings. Would it be worth while to come together again some time? Everyone agreed that it would be worth while. We elected as a contact person for the next meeting Maurice Rolls in Reading and decided tentatively that our next meeting would take place August 26-30, 1974. The place of the meeting was not yet determined.

Between these meetings we would try to provide all kind of important materials used in our curriculums and functions. It would be enough to send one copy for each center. Everyone of us should try to concentrate in some operationalized projects during the intervals so that we could report something of our activities in next meeting.

Dr. Harri Westermarck

CONCLUDING REMARKS

The objectives of this seminar was the following: Increase of personal acquaintance among the staff members in different W.K. Kellogg Foundation sponsored centers and better understanding about the objectives and functions of each center.

When we made these objectives I wanted to state them on so general level that I at the end of this seminar could evaluate the goal achievement and find out that we have been quite successful. Evaluation of any educational input is always difficult as we all as extension educators know that, but I think that these generally stated objectives have been achieved at least in some degree during these 5 days we have been together. We also got to get to know also the function of 3 non-Kellogg centers and at least I am especially glad over that. May be that I in my deep dreams had however also some more specific goals for our gathering, like getting to know through group works in some specific terms different aspects of theoretical frame and amount of research needed in extension education, but as I said these might have only been in my utmost utopia.

As I said in my opening remarks we could arrange this seminar in Finland with the generous financial help of W.K. Kellogg Foundation. Wnen the representative of this philanthropical foundation is now at present I would like to convey our best thanks to the headquarters in Battle Creek. This is ofcourse not only a sincere thank for this seminar but for the whole 5 years period which our center has received help.

In one of the dinner discussions Maurice Rolls made to me a brilliant suggestion: how are we going to solve the problem of continuity of this group? "I think that forming of this kind of invisible university between 11 different projects

and their trainers is an excellent idea and I hope that we will have sometime in the future an opportunity to meet again. At least now we know personally each other and it will be easier to get contacts now before the seminar.

I would like to thank all the chairmen for these days'sessions and all the lecturers during this seminar. I think that we moved during these days' discussion on both relatively high theoretical and also more pragmatic levels, but our chairmen could handle the academic debates quite well. I like to thank all the discussants and all of you who were present during these days. We at the center enjoyed having you here. Welcome again.